

Application No.: 10/022,723

Docket No.: R2184.0128/P128

LISTING OF CLAIMS

1. (Currently Amended) An optical disk device for writing information on an optical disk, said optical disk device having an APC (Automatic Power Control) part for monitored driving of a laser diode, said optical disk device comprising:

preparation means for searching an unused partition of a test area of said optical disk and reading out a reference power value from said optical disk;

APC-turn off means for turning off said APC part so that the APC part stops monitored driving of the laser diode when it is determined that the recording speed exceeds a predetermined speed;

first OPC (Optimum Power Control) means for obtaining a first optimum writing power value by writing on said unused partition by driving said laser diode at a plurality of first test laser power values centered on said reference power value, reading out said information recorded on said unused partition and determining the first optimum writing power value;

APC-turn on means for turning on said APC part so that the APC part resumes monitored driving of the laser diode after determining the first optimum writing power value when it is determined that said APC part has been turned off by said APC-turn off means the recording speed exceeds a predetermined speed; and

second OPC (Optimum Power Control) means for obtaining a second optimum writing power value by writing on a subsequent unused partition by driving said laser diode at a plurality of second test laser power values centered on said first optimum writing power value, reading out said information recorded on said subsequent unused partition and determining the second optimum writing power value.

Application No.: 10/022,723

Docket No.: R2184.0128/P128

2. (Original) The optical disk device as claimed in claim 1, wherein a number of said second test laser power values are less than a number of said first test laser power values.

3. (Original) The optical disk device as claimed in claim 1, wherein an interval of said second test laser power values is smaller than an interval of said first test laser power values.

4. (Currently Amended) The optical disk device as claimed in claim 1, wherein said first optimum writing power is derived using a first half of said unused partition of said test area and said second optimum writing power is derived using a second half of said unused partition of said test area.

5. (Currently Amended) The optical disk device as claimed in claim 1, wherein said first optimum writing power is derived using a second half of said unused partition of said test area and said second optimum writing power is derived using a first half of said unused partition of said test area.

6. (Original) The optical disk device as claimed in claim 1, wherein a writing operation is performed on the most recently used partition of the test area at a predetermined power value and then a writing operation is performed on said unused partition at said plurality of first test laser power values.

7. (Original) The optical disk device as claimed in claim 6, wherein said writing operation on said unused partition at said plurality of first test laser power values is performed after said optical disk has rotated through one or more revolutions.

8. (Original) The optical disk device as claimed in claim 1, wherein when the recording speed does not exceed a predetermined value, said first optimum writing power value is used as a writing power value.

Application No.: 10/022,723

Docket No.: R2184.0128/P128

9. (Currently Amended) A method of writing information on an optical disk comprising [[a]] the steps of:

a) searching an unused partition of a test area of said optical disk and reading out a reference power value from said optical disk;

b) turning off an APC part (Automatic Power Control) part so that the APC part stops monitored driving of the laser diode for monitored driving of a laser diode when it is determined that the recording speed exceeds a predetermined speed (1X);

c) for obtaining a first optimum writing power value by writing on said unused partition by driving said laser diode at a plurality of first test laser power values centered on said reference power value, reading out said information recorded on said unused partition and determining the first optimum writing power value;

d) turning on said APC part so that the APC part resumes monitored driving of the laser diode after determining the first optimum writing power value when it is determined that said APC part has been turned off in step b) the recording speed exceeds a predetermined speed; and

e) obtaining a second optimum writing power value by writing on a subsequent unused partition by driving said laser diode at a plurality of second test laser power values centered on said first optimum writing power value, reading out said information recorded on said subsequent unused partition and determining the second optimum writing power value.